



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,589	06/30/2004	Stefan Clauss	2893	4763

7590 03/28/2006  
Striker Striker & Stenby  
103 East Neck Road  
Huntington, NY 11743

EXAMINER

TERESINSKI, JOHN

ART UNIT	PAPER NUMBER
----------	--------------

2858

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/500,589

Applicant(s)

CLAUSS ET AL.

Examiner

John Teresinski

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-15 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 6 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: amendment to claim 1 recites "a value and a phase of a resistance are measured", the limitation is objected to because a resistive measurement would have a phase value or zero. The examiner suggests "resistance" be change to clearly define claimed subject matter. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2,4, 5, 7-15 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,211,662 to Bijawat et al. in view of U.S. Patent No. 6,509,744 to Biermann et al..

Regarding claim 1, Bijawat et al. disclose a hand held hidden object sensing method and apparatus according to which a detection signal is generated by at least one capacitive sensor device (column 3 lines 59-61), the detection signal penetrating the medium that is to be analyzed in such a way that information is obtained about the objects that are enclosed in the medium by evaluating the detection signal, particularly by measuring impedance (column 7 lines 20-30), wherein, to evaluate the detection signal, an algorithm is used that separates the measured signal into signal parts originating from the enclosing medium and signal parts originating from the

Art Unit: 2858

object enclosed in the medium (ie. An algorithm/step by step procedure for detecting a hidden object that separates the measured signal into signal parts originating from the enclosing medium and signal parts originating from the object enclosed in the medium including a capacitive sensor (10) is calibrated establishing a reference frame for the sensor (column 4 lines 29-51), during use of the sensor the unit is slid across an enclosing medium wherein the unit will illuminate LEDS when a hidden object is sensed, when slid across the enclosing medium the sensor will have a certain output, the sensor output will change when a hidden object detection triggering the indicating means. Therefore a process of steps are carried out to sense a hidden object and separation of the measured signal into a portion originating from the object enclosed in the medium, see also column 3 lines 43-61, column 4 lines 43-67 and Fig. 2). Bijawat et al. fails to disclose measuring impedance so that a value and a phase of a resistance are measured.

Bierman et al. disclose a method for measuring the distance between a sensor electrode and a workpiece with an intermediate medium separating the sensor electrode and workpiece (column 2 lines 23-35) including measuring impedance so that a value and a phase of a resistance are measured (ie. real and imaginary part of measuring capacitor, column 2 lines 28-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include measuring impedance so that a value and a phase of a resistance are measured as taught by Biermann et al. into Bijawat et al. for the advantage of providing a measurement means that eliminates the influence of a separating medium (column 2 lines 38-49).

Regarding claims 2 and 7-9, Bijawat et al. disclose a depth parameter for the material of the enclosing medium (column 3 lines 43-61).

Regarding claim 10, Bijawat et al. disclose depth information of the medium is obtained by measuring dielectric constants/changes in capacitance (column 4 lines 43-52).

Regarding claim 11, Bijawat et al. disclose the signal being measured and evaluated as a function of a lateral displacement of the sensor device that is generating the detection signal (column 4 lines 53-55).

Regarding claim 12, Bijawat et al. disclose the signal being measured and evaluated as a function of more than one measuring frequency (column 3 lines 62-67).

Regarding claim 13, Bijawat et al. disclose a hand-held locating device (10) for locating objects enclosed in a medium, having a sensor device, with means for generating a detection signal for the sensor device (column 7 lines 20-30), a control and evaluation unit for determining measured values from the detection signal (column 4 lines 3-15), and an output device for the determined measuring devices (column 4 lines 3-15).

Regarding claim 14, Bijawat et al. disclose the measuring device includes at least one internal calibration device for a measured signal (column 4 lines 3-15).

Regarding claims 4, 5 and 15, Bijawat et al. disclose measurement of at least one defined impedance (column 4 lines 43-45).

Regarding claim 17, Bijawat et al. disclose switching means for temporary activation of the calibration device (column 4 lines 28-32).

Regarding claim 18, Bijawat et al. disclose means for saving material data, in particular dielectric constants, of known materials (column 4 lines 3-15).

Regarding claim 19, Bijawat et al. disclose means that permit calculated measured results, in particular the position and/or depth of an object enclosed in a medium, to be depicted

in a spatially-resolved manner on a display device of the measuring device (Fig. 1 elements 28 and 30).

Regarding claim 20, Bijawat et al. disclose a measuring signal as a function of a lateral displacement of the sensor device (Fig. 2).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bijawat et al. in and Biermann et al. in view of U.S. Patent Publication No. 2001/0024126 to Sporl et al..

Regarding claim 3, Bijawat et al. as modified does not disclose a program map capable of being queried by an evaluation algorithm. Sporl et al. disclose a capacitive stud sensor including a program map capable of being queried by an evaluation algorithm (paragraph 16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a shift in current as taught by Sporl et al. into Bijawat et al. as modified for the purpose of providing increased accuracy

#### *Allowable Subject Matter*

Claims 6 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Regarding claims 6 and 16:

The primary reason for the allowance of claims 6 and 16 is the inclusion of obtaining at least one reference signal via a short-circuiting of the detection signal, in particular in the

capacitive sensor device. It is these features found in the claim, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### *Response to Arguments*

Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

#### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following is cited to further show the state of the art with respect to methods and devices for locating enclosed objects:

U.S. Patent No. 4,464,622 to Franklin discloses an electronic wall stud sensor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Teresinski whose telephone number is (571) 272-2235. The examiner can normally be reached on M-F 8:30 - 5:00.

Art Unit: 2858

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JT  
JT

March 17, 2006



DIANE LEE  
SUPERVISORY PATENT EXAMINER